UNITED STATES PATENT OFFICE.

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WINDOW-ADJUSTING ROD.

1,221,751.


To all whom it may concern:

Be it known that I, ALFRED M. LANE, a citizen of the United States, and a resident of the city of St. Louis and State of Missouri, have invented a new and useful Improvement in Window-Adjusting Rods, of which the following is a specification.

This invention relates particularly to self-adjusting rods or props for holding swinging windows in open or partly open position. The invention may also be applied to doors, blinds and similar swinging members which it may be desired to hold in an angularly adjusted position.

The principal object of the invention is a simple, compact device which is neat in appearance and which has no exposed parts liable to injury, and in which the working parts are protected from the weather.

Further objects of the invention appear in connection with the following description thereof; and what the invention consists in is more particularly defined in the appended claims.

In the accompanying drawings, wherein like reference characters designate the same parts in the several views:

Figure 1 is a horizontal cross-section through a window frame showing the top edge of the window and the adjusting rod attached thereto in horizontal plan view;

Fig. 2 is a vertical cross-section through the window frame on the line 2—2 in Fig. 1;

Fig. 3 is a longitudinal cross-section of the adjusting rod; and

Fig. 4 is a view similar to Fig. 3 of a modified form of adjusting rod.

Referring to the drawings, the device is shown to be applied to an ordinary casement window wherein the window sash 1 is hinged at one vertical edge to one side of the window frame 2 to swing outwardly. The top rail of the sash is provided with a groove or rabbit 3 along its inner edge to receive the telescoping adjusting rod 4, one end of which is pivotally attached to the top cross member or head of the window frame by means of a screw or other suitable fastening 5, and the other end of which is pivotally secured in the inner end of the groove 3 by means of a screw or other suitable fastening means 6. The adjusting rod consists of two principal members, an outer tubular casing 7 and an inner rod 8 which is slidably arranged to telescope in and out of the casing. The rod 8 is somewhat smaller than the inner diameter of the casing tube 7 and a bushing 9 is secured in the outer end of the casing tube for the rod to slide through. The inner end of the rod is flattened on two opposite sides and provided with a pivot pin 10 extending through it transversely with respect to the flattened portions. The friction shoes 11 are arranged on opposite sides of the flattened end portion of the rod 8 and are pivotally secured thereto by means of the pivot pin 10. The friction shoes have their ends projecting beyond the end of the rod 8 and provided with shoulders 12 on their inner faces at their extremities. The inner faces of the friction shoes may be shaped to conform to the inner surface of the tube 7, as shown in Fig. 3, or they may be provided with crosswise extending projections 13 adapted to fit into the transverse corrugations of the lining strips 14 of the modified form of adjusting rod shown in Fig. 4. There is a space between the shoulders 12 of the friction shoes and the end of the rod 8, and in this space a flat U-shaped spring 15 is arranged. The ends of the spring fit between the adjacent faces of the shoulders 12 and force the friction shoes outwardly against the inner surface of the tubular casing thereby maintaining the shoes and casing in frictional contact. The bushing 9 prevents the endwise withdrawal of the rod 8 from the tube 7 and guides its outer end in alignment with the casing tube.

When the window is swung open (as shown by dotted lines in Fig. 1) the two portions of the rod are pulled apart, the frictional contact of the shoes against the inner surface of the tubular casing not being sufficient to prevent such movement. The spring 13 is made of such strength as to cause sufficient friction between the shoes 11 and inner surface of the tubular casing to hold the window in adjusted position against ordinary wind pressure or similar forces tending to open or close the window.

It is evident that modifications in the shape of the tubular casing and shape of the frictional face of the jaws may be made with departing from the invention, and the
invention is not restricted to the particular forms and arrangements shown and described.

I claim the following as my invention:

1. A retaining prop for holding swinging frames in adjusted position consisting of a tubular casing having means for pivotally securing one end, a rod slideable in the free end of the casing and having means for pivotally securing its outer end, the inner end of the rod having oppositely arranged friction shoes loosely secured thereto, the free ends of said friction shoes projecting beyond the inner end of said rod and approaching each other at their extremities, and means confined in the space between the free ends of said shoes between their extremities and the extremity of said rod for maintaining said shoes in frictional contact with the inner walls.

2. A retaining prop for holding swinging frames in adjusted position consisting of a tubular casing having means for pivotally securing one end, a rod slideable in the free end of the casing and having means for pivotally securing its outer end, the inner end of the rod having oppositely arranged friction shoes loosely secured thereto, the inner extremities of said friction shoes projecting beyond the inner end of said rod and having shoulders on their inner sides near their extremities, and a V-shaped flat spring arranged in the space between said shoulders and the extremity of said rod for maintaining said shoes in frictional contact with the inner walls in said tubular casing.

Signed at Chicago, Illinois, this 27th day of September, 1915.

ALFRED M. LANE.